



## CRUISE CONTROL

290/295 - Ducato FL 2014

## CRUISE CONTROL - DESCRIPTION

Cruise Control is an electronically controlled driving assistance device that makes it possible to drive at a constant speed (above 30 km/h) without keeping the accelerator pedal pressed.

The function is managed by the Powertrain Control Module, which, through the CAN, receives commands from a dedicated left side steering column stalk.

To switch the Cruise Control on, turn the ring nut for the dedicated left side steering column stalk anticlockwise by one click.

Activation is signalled by the special warning light in the instrument panel switching on and a dedicated message on the display, where provided.

 The device cannot be turned on in either reverse gear or first gear. It is also not advisable to use it below fourth gear.

To set the desired speed, turn the ring nut anticlockwise to the first click and press the accelerator until the vehicle reaches the desired speed.

At this point, it is necessary to move the stalk upwards (+ position) for at least a second and then release it. The speed will be memorised and the accelerator pedal can then be released.

If necessary (for example, for overtaking) the accelerator pedal can be pressed. When the pedal is released the vehicle will automatically return to the speed memorised.

 When driving downhill it is possible that the speed may slightly exceed the speed set.

If the device has been switched off, for example as a result of pressing the brake or clutch pedal, the following must be carried out to restore the speed setting:

- accelerate gradually until the vehicle reaches a speed close to the one set;
- engage the gear selected at the time of the speed programming;
- press the button located at the end of the stalk.

The speed set can also be adjusted.

The speed memorised can be increased in two ways:

- by pressing the accelerator and memorizing the new speed reached;
- by moving the stalk upwards (+). Each movement of the stalk corresponds to an increase in speed of about 1 km/h, while keeping the stalk held upwards will continuously increase the speed.

The speed memorized can be decreased in two ways:

- by switching off the device and then memorizing the new speed;
- by moving the stalk downwards (-) until the new speed, which will be stored automatically, is reached. Each movement of the stalk will correspond to a slight reduction in speed of about 1 km/h, while keeping the stalk held downwards will decrease the speed continuously.

The device can be switched off in the following ways:

- by turning the ring nut to the central position ("OFF");
- by switching off the engine;
- by pressing the brake pedal;
- by pressing the clutch pedal;
- with the vehicle speed below the set limit;
- by pressing the accelerator pedal (in this case the system is not actually turned off but the acceleration request takes priority; the Cruise Control remains activated, without the need to press the button located at the end of the steering column stalk to restore the previous conditions once the acceleration is over).

In addition, the device switches off automatically if the ABS or ESP systems intervene or if there is a system failure.

Using the left steering column stalk it is also possible to activate the Speed Limiter function which allows the speed of the vehicle to be limited to the values set by the driver. The minimum speed that can be set is 30 km/h.

To activate the Speed Limiter function, turn the left steering column stalk clockwise by one click.

Activation of the device is indicated by the dedicated warning light on the instrument panel switching on and, for versions where provided, by a dedicated message on the display plus last programmed speed value.

The speed limit value can be set irrespective of the Speed Limiter function previous activation.

It can be increased or decreased by moving the stalk upwards (+) or downwards (-). Each movement of the stalk upwards or downwards will correspond to an increase or reduction in speed of about 1 km/h, while keeping the stalk held downwards or upwards will change the speed of about 5 km/h.

Press the button located at the end of the left steering column stalk to activate/deactivate the function.

The speed limit set by the driver can be exceeded by fully depressing the accelerator pedal, even after the function has been activated. When the set speed limit is reached, an increased resistance on the pedal itself will be perceived.

When the set speed limit is exceeded, the device is temporarily deactivated and the set speed value flashes on the display. To reactivate the function, reduce the speed below the programmed value.

The programmed speed flashes on the display in the following cases:

- the accelerator pedal has been fully depressed and the vehicle speed has exceeded the programmed speed value;
- the device cannot reduce the vehicle speed due to the steep gradient of the road;
- a sharp acceleration has been carried out.

To completely deactivate the device, turn the left steering column stalk ring nut again to the central position ("OFF"). When the Speed Limiter function deactivates, the dedicated warning light on the instrument panel switches off and a dedicated message, where provided, appears on the display.

In the event of a failure, the system is automatically deactivated.

## CRUISE CONTROL - FUNCTIONAL DESCRIPTION

The Cruise Control and Speed Limiter functions are mainly managed by the Powertrain Control Module and the Body Computer according to the actions taken on the dedicated steering column stalk H005.

The device activation control via the left steering column stalk H005, receives a reference earth at pin 1 of connector B of the steering column stalk which is supplied by the Body Computer M001 (pin 37 of connector H).

The Body Computer M001 (pin 56 of connector H) receives a negative control signal which allows the Speed Limiter or the Cruise Control function to be activated, according to the selection carried out using the steering column stalk H005 (pin 6 of connector B).

The Body Computer M001 also receives (pin 2 connector H) a negative signal from the steering column stalk H005 (pin 5 connector B) to manage the Cruise Control or Speed Limiter mode settings (increase/decrease).

The Body Computer M001 receives a direct battery power supply at pin A of connector A. This supply is protected upstream by fuse F71 (BCM1) of the maxifuse control unit on the battery B099 (connector D).

The Body Computer M001 also receives an ignition-operated supply (INT) at pin 2 of connector G.

It is connected to the earth of the central dashboard C022 (connector A) via pins 1 and 11 of connector G.

To manage the functions Cruise Control and Speed Limiter, the Body Computer M001 (pin 38 and 37 of connector D) and the engine control unit M010 (pin 24 and 25 of connector B for 2.0 JTD, 84 and 83 pin connector B for 3.0 JTD version; pin 69 and 70 of connector B for 2.3 JTD version; pin 30 and 31 of connector B for 2.3 JTD version Euro 6 and for 2.0 JTD version Euro 6; pins 20 and 51 of the connector B to the Natural Power version) communicate with each other by C-CAN network.

### E1050 CAN CONNECTION LINES

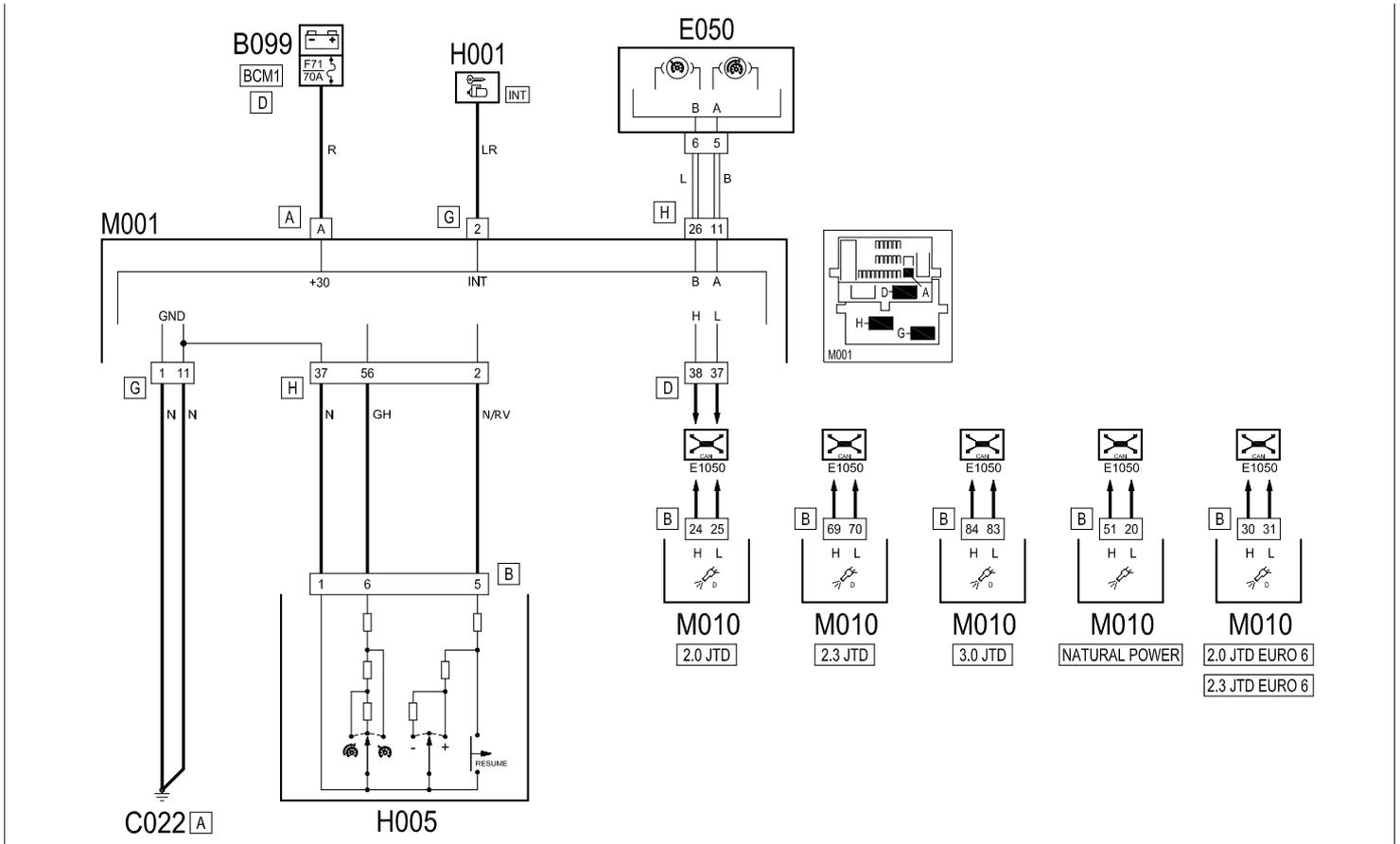
In addition the Powertrain Control Module M010 manages the "pedal released" signal (NC contact) from the second contact of brake pedal I030 and the "pressed clutch pedal" signal from switch I031 and the accelerator pedal K055.

### E5050 DIESEL ENGINES ELECTRONIC MANAGEMENT

### E5032 METHANE ENGINE ELECTRONIC MANAGEMENT

The Body Computer M001 is connected, via the CAN-B line, from pins 11 and 26 of connector H, to the instrument panel E050 (pins 5 and 6) to manage the instrument panel "Cruise Control" and "Speed Limiter" warning lights and, where provided, the dedicated messages on the display.

# CRUISE CONTROL - WIRING DIAGRAM



# CRUISE CONTROL - COMPONENT LOCATION

